

## MEANING OF LIVING WITH EXTERNAL FIXATION FOR GRADE III OPEN FRACTURE OF LOWER LIMBS: PATIENT VIEW

Catia Cristina Gomes LOPEZ<sup>a</sup>, Mônica Antar GAMBA<sup>b</sup>,  
Maria Clara Cassuli MATHEUS<sup>c</sup>

### ABSTRACT

The present study is aimed to understand the meaning of living with an external fixation device for grade III open fractures of the lower limbs from the perspective of the patient. The data were collected with six young adults who were undergoing outpatient orthopedic treatment in a public hospital in the city of São Paulo, through semi-structured interviews with open questions, between June and August 2010. Seeking to understand the meaning of this experience, we have maintained a phenomenological attitude during the analysis, which made it possible to reveal the phenomenon “try to live in spite of feeling trapped in a cage.” Patients said that their personal desire and support from others helped them reorganize their lives, despite the several challenges they had to overcome to adapt to the fastener attached to their body and the fear of the future and doubts about the success of treatment.

**Descriptors:** Orthopedic nursing. Fractures, open. External fixators. Body image.

### RESUMO

*O objetivo deste estudo foi compreender o significado de conviver com fixação externa por fratura exposta grau III em membros inferiores, sob o olhar do paciente. Os dados foram coletados com seis adultos jovens que faziam tratamento ambulatorial ortopédico, em um hospital público da cidade de São Paulo, por meio de entrevista semiestruturada com questões abertas, entre junho e agosto de 2010. Na busca do significado desta vivência, mantivemos uma atitude fenomenológica na análise, o que propiciou desvelar o fenômeno “buscar viver apesar de se sentir preso em uma gaiola”. Os pacientes apontam que é o desejo pessoal e apoio de outras pessoas que propiciam a reorganização de suas vidas, apesar dos inúmeros desafios que precisam superar para adaptarem-se ao fixador acoplado ao seu corpo, do medo que sentem em relação ao futuro e das dúvidas quanto ao tratamento.*

**Descritores:** Enfermagem ortopédica. Fraturas expostas. Fixadores externos. Imagem corporal.

**Título:** Significado de conviver com fixação externa por fratura exposta grau III em membros inferiores: o olhar do paciente.

### RESUMEN

*El objetivo de este estudio fue comprender el significado de vivir con fijación externa para las fracturas abiertas de grado III de los miembros inferiores bajo la mirada del paciente. Los datos fueron recogidos con seis jóvenes adultos que no habían recibido tratamiento ortopédico de ambulatorio en un hospital público en la ciudad de São Paulo, a través de entrevistas semiestructuradas con preguntas abiertas, entre junio y agosto de 2010. En búsqueda del significado de esta experiencia que hemos mantenido una actitud de análisis fenomenológico, lo que llevó a revelar el fenómeno “tratan de vivir a pesar de sentirse atrapado en una jaula.” Los pacientes indican que es el deseo y el apoyo de otros que están a favor de la reorganización de la vida personal, a pesar de los numerosos desafíos que se deben superar para adaptarse a la sujeción acoplada a su cuerpo, el miedo que sienten sobre el futuro y las dudas en el tratamiento.*

**Descriptores:** Enfermería ortopédica. Fracturas abiertas. Fijadores externos. Imagen corporal.

**Título:** Significado de la vida con fijación externa por fractura expuesta grado III en miembros inferiores: la mirada del paciente.

a Specialist in Hospital Management, Dermatology Nursing, Postgraduate in Stomal Therapy Nursing, Master in Health Sciences at Universidade Federal de São Paulo; São Paulo, (SP), Brazil;

b PhD in Public Health at Universidade de São Paulo, Associate Professor level II at Universidade Federal de São Paulo; SP, Brazil;

c PhD in Nursing at Universidade de São Paulo, Associate Professor at Universidade Federal de São Paulo; SP, Brazil.

## INTRODUCTION

Traffic accidents are the main cause of open fractures recorded in hospital settings<sup>(1-3)</sup>.

The main victims of open fractures are young people that are part of the economically active population<sup>(1-4)</sup> and lower limbs (MMII) are frequently affected. The most appropriate treatment in these cases is external fixation.

Open fractures perforate the skin and surrounding soft tissues and are in direct contact with the external environment<sup>(2)</sup>. Those classified as grade III have the following characteristics: high contaminant level, cause serious injury to soft tissues, insufficient amount of skin to cover the bone and often associated vascular injuries<sup>(5)</sup>.

Between the expectations and the treatment outcome, the selection of the method to treat the affected segment shall have a decisive role in the goal desired. External fixation provides rigid attachment and the alignment of fractures with the ability to treat serious injuries of the soft tissues. Because of the increased risk of infection in patients with open fractures, external fracture is generally the indicated treatment<sup>(6)</sup>.

This type of therapy may trigger reactions and feelings that can cause suffering and further change in body image. Getting used to the need to be attached to a structure that can change the shape of the body, change self-image and cause the person to become the focus of many people's attention and attract their curiosity becomes a challenge for these patients.

Reports of orthopedic patients victimized by road accidents in Singapore indicated, after qualitative analysis, that regardless of the severity of injuries, a traumatic event forces the victims to re-examine their lives, change their attitudes and generates socioeconomic losses. Also, most participants felt that nurses could not understand the situation and provide the care and counseling necessary for recovery. It is important to stress that for those patients who shared their worries and concerns with the nurses and developed a nurse-patient relationship, the recovery process was notably different<sup>(7)</sup>.

A sudden tragedy causes a change in a person's life, the disorders. The conflicts and the severity of this occurrence can be translated into the vulnerability of the emotional structure. A nurse-patient

relationship based upon understanding and trust may help overcome such a dramatic event.

Therefore, the present study is aimed to understand the meaning of living with external fixation for grade III open fractures of the lower limbs, from the perspective of the patient.

## METHODOLOGY

Since the human being is the main object of the investigation of this study, we decided to use qualitative research since it aims to understand the universe of meanings, motives, aspirations, beliefs, values and subjective attitudes observed in the speech of individuals<sup>(8)</sup> and in an attempt to seek the meanings of this experience, we maintained a phenomenological attitude to understand the phenomenon<sup>(8-9)</sup>.

The study is part of the master's research. The experience of living with external fixation for grade III open fracture of the lower limbs<sup>(10)</sup>, was approved by the Ethics Research Committee of Universidade Federal de São Paulo, under protocol number 0435/10 and developed in an outpatient orthopedics clinic that belongs to a public hospital in the city of São Paulo.

The subjects were six individuals diagnosed with grade III open fracture of the lower limbs who used external fixation, aged between 20 and 40 years. Data were collected from June to August 2010. From the medical records of the subjects, data such as sex, age, marital status, number of children, religion, education, occupation, cause of fracture, body segment affected, period of occurrence of fracture, use of orthoses and period of use of external fixation were collected.

After explaining the purpose of the study and obtaining the consent of the subject, we conducted the semi-structured interview in a private location, which contained the following questions: 1. Tell me how it feels to live with a fastener attached to your body. 2. What are your feelings with regard to this situation?

Then the interviews were transcribed verbatim and the analytical process was conducted according to four steps: the global view of the entire testimony, the division of the report into units of meaning, the transcription of each unit of meaning in psychological understanding and the composition of specific and general syntheses, by

extracting the structure of what was experienced<sup>(9)</sup>. The categories that result from this process and the unveiling of the phenomenon are described below.

## RESULTS

All participants used the circular fastener called *Ilizarov*, although this was not an inclusion criterion.

Five of the six subjects were male. Three were single, two married and one separated. Regarding religion, four subjects reported being catholic and two said they were evangelicals. In what concerns education, two had completed secondary education (a student and a delivery boy), two had completed elementary education (one was retired for disability resulting from the accident), one had incomplete elementary education (worked in maintenance ancillary duty), and one had higher education (a physical education teacher). The diagnoses involved fractures in the acetabulum, femur, tibia, fibula and ankle; four fractures were caused by motorcycle accidents, one by car accident and one by accident with a truck; the period of use of external fixation ranged from four months to three years, and four subjects used crutches.

### Understanding the experience

Be a victim of change, in this case, an accident, not recognizing one's own body modified by complex injuries and attached to a fastener strongly affects the psychosocial aspects of that person, his/her liberty, power of choice, but most of all his/her emotions.

Thus, the three categories "face a sudden interruption in everyday life", "feel trapped in a cage" and "seek to restructure life despite the accident and the cage" clarify the experience of people who have been victims of a serious accident, diagnosed with grade III open fracture of the lower limbs who use a fastener.

The first category "face a sudden interruption of everyday life" is feeling that life has taken a completely unexpected direction, shaking the psychosocial spheres, disrupting the family universe, friendships and relationships and imposing a reality that devastates dreams and projects. This condition distresses the patient who realizes he/she is experiencing moments of extreme vulnerability, horror and disappointment.

Thus, the experience of such an expected and terrifying situation that interrupts flow of life causing consternation was demonstrated in the following statements:

*So my life has completely stopped [...]. (E3)*

*I lost my girlfriend, I thought I had friends, I don't. (E1)*

*[...] you start to get sad, distressed, know what I mean? [...] Living with the fastener is bad [...] sad, you know [...]. (E6)*

The second category "feel trapped in a cage" means that the patient's life is limited by the fastener. The word cage is used here because the orthopedic device is similar to a cage, and that's how people call the circular fixing device. However, more than being structurally similar to a cage the fastener becomes a symbol of entrapment, as if the patient were trapped inside.

This category includes situations that restricts the freedom of a person who uses the fastener such as: have to endure pain, feel the body trapped (to the fastener), as well as perceiving himself/herself as an inconvenience to other people, especially those upon whom he/she depends. Experiencing all these events and also realizing that he/she attracts attention in an unpleasant way drives the person away from social life, which increases the feeling of loss of freedom. The statements that indicated these perceptions follow:

*You don't know if it is disgust or fear, it's something different that no one is used to see [...]. (E1)*

*You have to ask others for help for anything you want to do [...] this is bad [...] you cannot live that way. (E6)*

*It is like to be living with someone stuck on you [...] and you don't want that on your side, you know? (E2)*

*[...] I don't leave home [...]. (E3)*

The third category "seek to restructure life despite the accident and the cage" portrays the path of a possible reorganization of life, by its reconstruction on a new foundation, characterizing and legitimating the patient's wish to face life again.

Thus, the person seeks both the support of others and to understand this new reality in order to face life again, despite being afraid of the

future, of the several challenges to be overcome, and despite the doubts about the effectiveness of the treatment. Some statements that depict this path follow:

*[...] and I am particularly afraid of getting lame... I am very concerned about my physical appearance [...]. (E1)*

*[...] Today I think differently [...] because of all I've been through when I was hospitalized [...] we think about the whole situation and seek the help of God [...]. (E5)*

*At the beginning everything is difficult: taking a shower, lying down, sleeping comfortably [...]. (E3)*

*[...] If I yielded to my impulses I guess I would be consuming drugs, alcohol, or might have killed myself [...] my family is everything to me [...]. (E1)*

*[...] I am confident that a very satisfactory outcome will be reached [...] as soon as I get rid of the cage [...] I try to do everything within my power to obtain a good outcome [...]. (E1)*

*[...] the doctors don't explain many things [...] the cage must be adjusted every 12 hours [...] I try to find as much information about my situation as I can [...]. (E1)*

*[...] Inpatients need as much attention as possible [...]. (E2)*

*[...] I got married via the internet [...] I managed to retire. (E4)*

Therefore, the phenomenon of this experience revealed by the patients shows the path through despair, horror, disappointment, discouragement, fear, uncertainty, pain, reflection, belief, imperfections, and finally the resumption of life, the main aspect in this tragic event. Thus, after analysis of the three categories, the phenomenon was titled: "seek to live despite being trapped in a cage". Since the glow of life was overshadowed by this dramatic situation, the patient must relentlessly seek to overcome his/her disastrous fate.

## DISCUSSION

The orthopedic patient is anxious about the surgical treatment, particularly when a device is attached to his/her body, visible to anyone, and which changes his/her sense of balance and space<sup>(11)</sup>.

"I don't have a body, I am a body"<sup>(12)</sup>. Attached and visible to anyone, the external fixation changes the body shape and the relationships of the patient with the world. The body as a space of perception and interaction with the world now houses an undesirable, strange, unusual structure. Becoming aware of this reality, have this perception, is consistent with the findings of this study.

External fixation involves substantial disfiguration of the human body and leads to a degree of disablement. There is an inevitable insult to the body image that causes disruption of personal and social relationships, and this can lead to isolation and depression<sup>(13)</sup>, such as the results obtained in the present study, that is: feeling the body attached to the fastener, losing freedom, feeling dismayed and moving away from social life characterize this sensation. The change in appearance draws attention to the uncommon element that now is part of their body and subjects it to unwanted exposure, a state of absolute restriction of their activities and that affect their relationship with other people.

The psychosocial aspects related to external fixation are shown in a study<sup>(14)</sup> where the author points out that few studies focus on the care of individuals that are attached to such devices. In the reports, and data from the present study, the device is described as 'dreadful and as a friendly manner of torture'; a metal apparatus outside the body, which may seem 'grotesque and painful'. The coexistence of patients with pelvic devices led to statements about "mutilation and abnormality", with emphasis to body changes. The main psychosocial issues are related to the fear of seeing the device attached to the limb, a jeopardized body image and self-image, and in the present study, the physical reality was transformed by trauma, and the fastener is objectively linked to the body. That which the patient thought was his/her body was completely mischaracterized. The categories "face a sudden interruption in everyday life" and "feel trapped in a cage" demonstrate that the change is real.

Thus, nursing care should have an empathic character, i.e. the nurse should seek to understand the situations to which a person victimized by such a tragedy may be exposed. And this understanding leads to an assessment of the professional behavior and involvement in direct care of the patient and his/her family<sup>(15)</sup>.



The family is support and, security when you can count on it. Resuming the speech of one of our interviewees who said that his/her family was everything to him/her, and since I have followed the experience of these people, I can say that the presence of the family and their support make all the difference for a successful therapy. The family represents the possibility of reconstruction of strength by means of unity, and is noteworthy in nursing practice.

Depending on other people and losing the freedom of living as we lived establishes a new daily routine where the activities are very limited.

Man exists by being present. In the presence is the horizon to fully understand and interpret the being<sup>(16)</sup>. When an individual suffers a fateful accident that sentences him/her to live attached to a fastener, he/she experiences ways of being in a world that are full and separated in parts, integrating and dissociated, skilled and disabling.

On the other hand, through dialogue, human beings can show themselves in their entirety, recognizing each others, establishing a shared world<sup>(17)</sup>.

But in this shared world where human beings can exist in their entirety, external fixation may constitute a barrier, because it is something unpleasant, far from meeting the criteria and requirements of a society that most times does not tolerate what is different. So, the individual realizes that being attached to a fastener exposes him/her to the judgment of others and makes him/her vulnerable to them. He/she is not recognized by the social group and becomes the focus of conversation, being forced to face isolation and perceived only thanks to the impact of his/her curious figure.

External fixation represents the view the individual has of him/herself. It is the present, the past and the future seen through a cage, which does not include the features he/she wants to claim as his or hers as a person. As it has been shown in this study, the individual becomes the fastener because his/her image and the change in this/her body are identified in this device, and because he/she is reduced to this shape, he/she experiences this situation up to its limit, in confrontation with fatality, with the physical change or with the emotional change.

The multidisciplinary team that treats people that use an external fixation device must have a broad view of everything surrounding this event. Knowing the technical procedures is not enough, for the dynamics of hospital treatment should be concerned

with the view an individual with an external fixation device has of himself/herself, the human aspects of care and with the other in his/her entirety.

Dealing with the new shape of his/her body that is much different than it was before and facing a challenging and biased world requires courage and abilities from those who live with an external fixation device and try to accept the consequences of this dramatic situation in the best possible way. This process can be facilitated with the proper encouragement of the nursing staff and other professionals that treat the patient.

## FINAL CONSIDERATIONS

A person who lives with an external fixation device for grade III open fractures of the lower limbs feels trapped in a cage, but longs for freedom. If nurses are aware of this situation they may be able to offer the patient, besides their technical expertise, their involvement and care for the patient's needs. Thus, the treatment should include awareness raising of this process by the patient and his/her family, in order to facilitate patient's adaptation to the new body shape.

The risk of mutilation, of permanent injury, of being unable to perform his/her regular activities, of not being able to support him/herself are aspects that deserve the attention of the professional staff that deals with the individual with an external fixation device.

Thus, the nurse should encourage the patient to realize his/her possibilities of restructuring and reorganizing his/her life, a subcategory that is not restricted only to the way in which the patient should be mobilized to face such an adverse situation, but also the possibility of facing the world in a different way.

In this regard, a multifactorial approach to health and illness is a requirement for healthcare professionals, especially the nurse who may take advantage of the nursing consultations to participate and encourage support networks.

One limitation of this study concerns the age range, education and income of the subjects. Further studies with subjects of different age ranges, education levels and higher income could provide the understanding of other impacts that affect the lives of people who use external fixation devices for grade III open fractures of the lower limbs.

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**Author's address / Endereço do autor /  
Dirección del autor**

Catia Cristina Gomes Lopez  
Av. Engenheiro Soares de Camargo, 532, Jardim  
Hercília  
03556-000, São Paulo, SP  
E-mail: [catia.lopez@ig.com.br](mailto:catia.lopez@ig.com.br)

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